SUBJECT INDEX

Vol. 110B, Nos 1-4

Acetylcholinesterase, 91, 121 Acetyl-CoA carboxylase, 417 N-Acetyltransferase, 33 Acidification, 291 Activating enzymes, 167 Acute phase, 445 Adaptation temperature, 367 Adenine, 37 Adenosine deaminase, 349 Adenylic metabolism, 605 Aedes aegypti, 641 Aeshna cyanea, 65 Ageing, 37 Aggregation, 339 Alkaline phosphatase, 315, 739 Alkaloids, 683 Allatectomy, 255 Allelochemical, 683 Allozyme variation, 225 Alpha-helix, 367 Amblyomma hebraeum, 155 Amino acid sequences, 523, 805 Amino acids, 589 Aminopeptidase, 661 Amphibian, 599 Amylase, 201 Anaerobic, 689 Analysis of Variance, 37 Ancestral form, 555 Anesthetized dog, 277 Anion exchange, 339 Anostraca, 799 Antheraea mylitta, 201 Anti-inflammatory action, 817 Anti-LPL antibody, 47 Antifouling, 477 Antioxidant, 371 Aplysia vaccaria hemocyanin, 515 Apo AI, 583 Apo B, 583 Apolar conjugates, 155 Apolipoproteins, 583 Arachidonic acid, 613 Ascidian, 689 Asparatate metabolism, 431 Aspartate transaminase, 431 Assimilation, 467 Association site, 565 Atlantic cod, (Gadus morhua), 315, 707

Bacterial clumping, 403 BALB/c, 349 Band 3 organization, 339 Bear, 785 Binding, 451 Binding proteins, 467 Biomphalaria glabrata, 729 BiP, 409 Bird's plumage, 131 Bison, 235 Bison bonasus, 235 Blood meals, 613 BN 52021, 629

ATP-agarose, 409

Bovine serum albumin, 629 Bovine spermatozoa, 605 Brain, 309 Buffalo, 37 Bull, 503

C57BL/6, 349 Cactus, 683 Calcium independent, 547 Calcium ions, 577, 747 Calf, 349 Calmodulin, 747 Canary xantophylls, 131 Canthaxanthin, 799 Carausius morosus, 255 Carbamates, 121 Carbohydrate, 761 Carbohydrate composition, 565 Carbohydrate pathways, 577 Carcinogenesis, 167 Cardiac sarcolemma, 345 Carduelinae, 131 Carnitine palmitoyl transferase I, 417 Carnivora, 785 Carotenoid binding sites, 393 Carotenoids, 131, 719, 799 Carotenoproteins, 385, 393 Cat, 785 Catalase, 145 Cathepsin D, 445 Cathepsins, 241 Cationic carboxypeptidase B, 791 Caudiverbera caudiverbera, 747 Caulimovirus, 3 cDNA, 75, 599 cDNA sequence, 523 Cell growth, 145 Cell volume, 345 Cell/tissue culture, 37 Centrophorus, 267 Centroscymnus, 267 Chaperone, 409 Characterization, 777 Chemiluminescent assay, 755 Chicken, 47, 531 Cholesterol, 183 Cholinergic, 409 Cholinesterase inhibitors, 91 Cholinesterases, 649 Chromatofocusing, 547 Chrysemys picta, 583 Chymotrypsin-like, 707 Chymotrypsin-like serine protease, 777 Circular dichroism, 367 Cis-canthaxanthin, 799 Cladistics, 805 Clarias gariepinus, 589 Clathrin, 331 Cleavage pattern, 725 Cloning, 599 Cnidarian, 555 Co2+-enzyme, 791 Coat proteins, 331

Coated vesicles, 331

Cock, 331 Cod muscle, 547 Coelenterate, 555 Cold-adaptation, 315 Collagen, 707 Collagenase, 707 Collagenolytic, 707 Compartmentation, 211 Conjugating enzymes, 167 Copper content, 565 Corpora allata, 255 Cotton worm, 379 Cowper's gland, 503 Crabs, 115 Crayfish, 425 Crustacean, 175 Crustacyanin, 393 Cuticle, 477, 661 Cuticle development, 155 Cyclic AMP, 577 Cyst, 799 Cytochrome P-450, 683 Cytoskeletal Proteins, 241 Cytoskeleton, 483 Cytosol, 431 Cytotoxin, 83

DAGE, 267 DEAE-Sepharose, 547 Deania, 267 Desaturation, 183 Detection method, 641 Developmental mode, 719 Diapause, 539 Diet, 633 Dietary lipids, 729 Differentiation, 511 Digestion, 285 Digestive enzymes, 301, 285 Digestive gland-gonad complex, 729 Digestive juice, 201 Diptera, 683 Dissociation, 331 Disulfide bridge, 785 Divalent cation, 17 Divergence time, 225 DNA structure, 17 Dog, 483, 785 Dogfish (Scyliorhinus canicula), 791 Domestic pig, 725 Domestication, 725 Drosophila, 683 Drug metabolising enzymes, 167

Early embryonic development, 629 Ecdysone 20-mono-oxygenase, 57 Ecdysteroid metabolism, 155 Ecdysteroids, 57, 155 3α Ecdysteroids, 155 β -Echinenone, 719 Echinoderm, 225, 477 Echinostoma caproni, 729 Ectotherm, 315 Ectothermic and endothermic animals, 309 Effect of Ca2+, 201 EGF, 697 Eggs, 493, 719 Eicosanoids, 613 Electric organ, 409 Electrophoresis, 121, 483 Embryogenesis, 493 Embryonated eggs, 175 Embryonic cuticles, 155

Emerita asiatica, 175 Endonuclease, 17 Energy charge, 605 Energy metabolism, 103 Enzyme electrophoresis, 225 Enzymes of adenylic metabolism, 605 Epimer, 155 Epithelium, 511 Esterase, 121 Esterification pathways, 65 Ethacrynic acid, 345 Etmopterus, 267 Eutherian mammals, 805 Evolution, 3, 523 Evolutionary implications, 417 Expression, 599 Extra-hepatic tissues, 167 Extraction, 131

Fairy shrimp, 799 Fat body, 767 Fattening, 47 Fatty acids, 183, 589, 613 Fertilization, 493, 629 FGF, 697 Fibroblast, 145 Fischer rats, 167 Fish myosin, 367 Fish, 315 Flavins, 467 Flesh-flies, 57 Free fatty acid transport, 767 Frog, 33, 599 Frog skeletal muscle, 747 Fructose 1,6-bisphosphate, 689 Fructose 2,6-bisphosphate, 425 Functional units, 565 Fungus, 661 Furosemide, 345

Gadus morhua, 315 Ganglioside, 445 Gastropod, 565, 761 Gastropoda, 649 Gene expression, 623 Gene family homologs, 75 Genetic distance, 225 Genetic selection, 531 Genetic strains, 589 Gentamycin, 817 Geographic differentiation, 225 Gills, 115 β-Glucuronidase, 349 Glutathione peroxidase, 145 Glutathione, 145, 371 Glycogen, 539, 577 Glycogen phosphorylase, 577 Glycogenolysis control, 577 Glycolysis regulation, 425 Glycoprotein, 315, 445, 483, 761 Glycosylation, 785 Golgi, 445 Gonad, 719 Gonadal hormones, 33 Gonadectomy, 33 Ground squirrel, 451 Growth, 531 Growth factors, 531 Guanine nucleotides, 211

Haemocyanin, 565 Haemolymph, 379 Haptoglobin, 785 Harderian gland, 33 HDL, 439 Heart, 211 Heat activation, 791 Heat shock proteins, 409 Heavy chain, 331 Heliocidaris erythrogramma, 719 Heliocidaris tuberculata, 719 Heliothis virescens, 357 Helix, 649 Hemocyanin, 761 Hemocytes, 403 Hemoglobin chains, 193 Hemolymph fatty acids, 767 Hepadnavirus, 3 Hepatic activity, 167 Hexose monophosphate dehydrogenases, 309 Hibernation, 451 Homodimer, 315 Hormone, 285 Hormones, 671 HSP70, 409 Human, 37, 503 Hyalophora cecropia, 357 Hydrolases, 483 Hydroxyl radical, 277 Hypothermia, 451 Hypoxanthine, 37

1₅₀, 121 190, 121 Immunoblotting, 331 Immunocytochemistry, 403 Immunohistochemistry, 503 Immunostimulant, 755 Inflammation, 445, 817 Inhibition study, 649 Inhibitor, 379 Initiation, 697 Insect, 17, 291, 467, 661, 683, 285 Insect hexamerin, 767 Insect lipoproteins, 767 Intestinal absorption, 65 Intracellular, 547 Invertebrate, 477, 777 IP₃, 747 IP₃ 3-kinase, 747 IP, 5-phosphatase, 747 Iron deficiency, 167 Ischemia, 277 Isoenzyme, 777 Isozyme switching, 623 Isozymes, 201

Juvenile hormone, 357

K_m, 201 Keratinocyte, 511 Kinetic constants, 649 Kinetic properties, 431 Kojic acid, 379

Lactate dehydrogenase, 623, 689
Lactation, 633
Lactoferrin, 755
Lampreys, 417
LC/MS analysis, 131
LC/UV-vis analysis, 131
Ldh-c, Ldh-a, 623
Lectin, 175
Lectin binding, 91
Lepidoptera, 379
Leucyl aminopeptidase, 241

Light chain, 331
Light meromyosin, 367
Limited proteolysis, 565
Lipid peroxidation, 371
Lipids, 183
Lipogenesis, 417
Lipoprotein lipase, 47
Lipoproteins, 583
Liposcelis spp., 121
Liver, 211, 417, 445
Long term effect, 167
Long-chain base, 511
Long-term anoxia, 103
Low temperature, 103
Lyso-platelet-activating factor, 629Amino acids, 633
Lyso-put, 235

Malonyl-CoA, 417 Manduca sexta, 357, 661 Mantle tissue, 577 Marine invertebrates, 371 Marine snail, 761 Marsupial, 523 Maturation-related enzymes, 349 Melatonin, 33 Membrane proteins, 339 Membrane-associated protein, 315 Metabolism, 689 Metalloenzyme, 791 Metalloprotein, 315 Metarhizium anisopliae, 661 Microvillar membrane, 483 Midgut endocrine cells, 301 Midgut, 285, 291 Midgut gland, 425 Milk, 633 Minerals, 589 Mitochondria, 211 Molecular forms, 649 Molecular weights, 515 Mollusc, 403, 565 Mollusca, 649 Molluscan, 777 Molluscan serine protease, 75 Monoclonal antibodies, 385 Monosaccharide, 761 Monovalent cation ATPase, 345 Morgan-Elson, 175 Mosquito, 17, 641 mtDNA, 725 Mucin, 175 Musca domestica, 357 Muscle, 417, 689 Muscle cells, 531 Mussels, 103 Myo-inositol, 539 Myoglobins, 193 Myotoxicity, 241 Mytilus galloprovincialis, 103, 577

N-acetyl-β-D-glucosaminidase, 349
N-terminal sequence, 777
Na pump, 555
Na,K-ATPase, 345
NADPH diaphorase activity, 403
NADPH oxidase, 817
NADP+-linked isocitrate dehydrogenase, 309
NADP+-linked malic enzyme, 309
Na-ATPase, 345
(Na + K)-ATPase, 555
Na *,K *-ATPase, Na */K *-ATPase, 555
NBT assay, 755
Neutrophils, 817

Nitric oxide, 403 Nitric oxide synthase, 403 Nuclease, 17 5'-Nucleotidase, 605 Nucleoside diphosphate kinase, 211 Nucleotide sequences, 805 Nutrition, 633

O-linked glycoprotein, 175 Oil Red O histochemistry, 729 Oleic acid, 183 Oncorhynchus mykiss, 439 Optimum pH, 201 Orconectes limosus, 425 Organophosphates, 121 Ornithine decarboxylase, 531 Osmoregulation, 115 Otariid, 633 Ouabain, 345, 555 Outgroup comparisons, 805 Overwintering, 539 Oxygen affinities (Pso), 193 Oxygen binding rates, 193 Oxygen dissociation rates, 193 Oxygen equilibrium, 193 Oxygen toxicity, 145

Pachysphinx occidentalis, 357 PAF antagonists, 629 PAF toxicity, 629 Paleogeography, 225 Pancreatic enzymes, 75 Pararetrovirus, 3 Parsimony analysis, 523 PCR, 599 PCR screen, 493 Periplaneta americana, 357 Permeability barrier, 511 Phagocytic cells, 755 Phagocytosis, 403, 755 Phasmatodea, 255 Phenobarbital, 683 Phocid, 633 Phosphate content, 605 Phosphofructokinase, 425 Phospholipase A, 83 Phospholipids A₂, 547, 503 Phospholipids, 613 Phosphoric monoester hydrolase, 315 Photoperiod, 539 Phylogenetic tree, 805 Phylogeny, 523 Pigeon, 211 Pigments, 131, 799 Pila leopoldvillensis, 565 Pinniped, 633 PLA2, 547 Placenta, 431 Plasma, 583 Plasma lipoproteins, 439 Plasma phenoloxidase, 641 Platelet-activating factor, 629 Platelets, 91 Plumage colour, 131 PNPPases, 605 Poikilotherm, 315 Polyamines, 115, 531 Polyclonal antibodies, 385, 503 Polysubstrate monooxygenase, 683 Porcine, 183

Potentiation of fertilization, 629

Prandial mechanism, 285

Prophenoloxidase, 379

Prostate, 503 Protamines, 805 Protease, 241, 477, 661 Protein, 301, 633 Protein degradation, 241 Protein kinase C, 511 Protein mapping, 483 Protein purification, 641 Protein structure, 523 Proteinase, 661 Protein-tyrosine kinase, 493 Protein-tyrosine phosphatase, 493 Proteolysis, 331 Puberty, 623 Purification, 431, 547, 777, 791 Putative Apo E, 583 Putrescine, 115 Pyura stolonifera, 689

Rabbit, 211, 345

Radiolabelling, 477 Rainbow trout, 439, 739, 755 Rapana, 761 Rat, 211 Ratio between Phase I and II enzyme activities, 167 Receptor, 451 Red cell, 339 Rediae, 729 Regulation, 285, 689 Reproductive cycle, 371 Reptiles, 583 Resistance, 683 Restriction endonucleases, 725 Retinol-binding protein, 385 Retroelement, 3 Retron, 3 Retrotransposon, 3 Retrovirus, 3 Reverse transcriptase, 3 Reversible, 339 Rhinoceros, 37 Rhodopsin, 599 Riboflavin, 467 Rod, 367 RT-PCR, 697

Salicylic acid, 277 Salinity, 115 Samia cynthia, 357 Sample handling, 439 Saturated fatty acids, 65 Scallop, 371, 777 Scanning transmission electron microscopy, 515 Schistocerca americana, 357 Scyllo-inositol, 539 Sea urchin, 225, 371, 493, 719 Sea urchin sperm, 629 Seasonality, 235 Secretagogue, 285 Secretion, 291, 301 Sedimentation analysis, 649 Seminal plasma, 503 Seminal vesicle fluid, 503 Seminal vesicles, 503 Serine proteinase, 707 Serine-esterase, 349 Sex-difference, 33 -SH groups, 339 Shark liver oils, 267 Sialyltransferase, 445 Silk gland, 671 Silk protein genes, 671 Silk proteins, 671

Size-exclusion chromatography, 175 Skin morphogenesis, 697 SLO, 267 Small intestine, 483 Snake venom, 83, 241 Sodium, potassium-ATPase, 115 Somniosus, 267 Sorbitol, 539 Species difference, 145 Spermatogenesis, 623 Spermidine, 115 Spermine, 115 Spermine, 115 Sphingolipid, 511 Sphingosine, 511

Spodoptera littoralis, 379 Squalene, 267 Stable flies, 613 Starfish, 225 Steroid, 451 Stick insect, 255 Stomoxys calcitrans, 291,

Stomoxys calcitrans, 291, 613
Stopped-flow spectrophotometry, 193
Storage proteins, 767
Stratum corneum, 511

Subunit, 761
Subunit dissociation light-scattering, 515
Subunit structure, 515
Sugar analysis, 761
Superoxide anion, 755
Superoxide dismutase, 145
Surface coat, 477

T-cell maturation, 349 T-lymphocytes, 349 Tasar silkworm, 201 Teleostei, 739 Telomerase, 3 Temperature, 33, 539 Tenebrio molitor, 357 Tentacles, 555 Testicle, 767 Tetrameric, 339 Tetramitromethane, 393 TGF_{α} , 697 TGF_{β} , 697

Synergism, 83

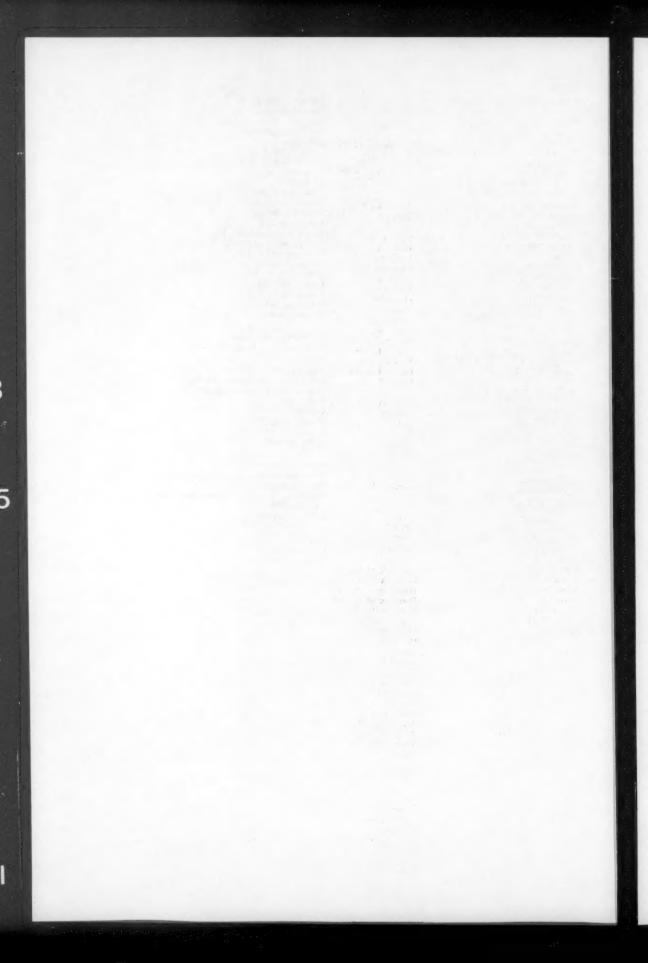
Thermal activation, 451 Thermal transition, 367 Thin-layer chromatography, 729 Thy 1.2 antigen, 349 Tick, 155 α-Tocopherol, 371 Torpedo, 409 Trait-gene, 531 Transcript, 75 Transcription, 285 Transcription factors, 671 Transformation, 37 Translation, 285 Translational regulation, 623 Transmission electron microscopy, 729 Transport, 467 Transthyretin, 523 Triglyceride, 47, 183 Trypsin, 285, 291 Turkey, 47 Tyrosinase, 641 Tyrosine modification, 393

Ultracentrifugation, 439 Uncommon branching, 805

Vertebrate, 193, 467 Very high density lipoproteins, 767 Very-low-density lipoprotein, 47 Vision, 599 Vitamin C, 739 Vitellogenesis, 255 Vitellogenin, 175, 255 VLDL secretion rate, 47

Wandering behaviour, 57 Water-soluble carbodiimide (EDAC), 477 Wet synchronization, 57 Whole body biochemical composition, 589 Wild boar, 725 Wool follicle, 697

Zinc, 315 Zymogen activation, 379 Zymogen granule, 291



AUTHOR INDEX

Vol. 110B, Nos 1-4

Aaen B., 547 Abraham E. G., 201 Amemiya S., 719 Andjus R. K., 451 Anstee J. H., 379 Asano H., 225 Asgeirsson B., 315

Babin P. J., 439 Bakes M. J., 267 Baldridge G. D., 17 Baldwin J., 689 Barja P., 349 Batt R. M., 483 Baumgarten I., 37 Beers K., 729 Berdyshev E. V., 629 Berg L., 493 Bernard-Griffiths M.-A., 47 Bjarnason J. B., 707 Blakemore D., 285, 291, 301 Borkow G., 83 Brack C. M., 523 Bradley J. T., 255 Brennan S., 689 Brenner R. R., 767 Bukato G., 309 Bulfield G., 531 Burks C. S., 641 Byrne M., 719

Cabezas J. A., 91
Cake M. H., 417
Callard I. P., 583
Cam G. R., 697
Camejo J. L., 345
Carrasco M. A., 747
Casey N. H., 589
Cattani O., 103
Cecchettini A., 255
Celentano G., 131
Chaim-Matyas A., 83
Chen H., 725
Chlebowski J. F., 315
Clark F., 493
Connat J.-L., 155
Corey Specht S., 555
Cortesi P., 103
Costa D. P., 633

Dabrowski K., 739
Danielson P. B., 683
Darvas B., 57
Davis T. A., 633
De Leenheer A. P., 799
Declercq L., 565
Devaraj H., 175
Diehl P. A., 155
Dotson E. M., 155
Dumont H. J., 799

Edwards M. D., 515 Eichler J., 409 Eliopoulos E. E., 393 Enoki Y., 193

Faiz M. A., 241
Fallon A. M., 17
Farag A. I., 57
Fernandez Gonzalez M., 577
Figueroa S., 747
Figueroa-Nieves R., 555
Flavell A. J., 3
Fogleman J. C., 683
Fontanili P., 403
Fox J. W., 707
Franchini A., 403
Freire M., 349
Fried B., 729
Fuchs M. S., 641
Fujino T., 729

Gadelhak G. G., 613 Genov N., 761 Gielens C., 565 Gill J., 235 Giorgi F., 255 Giovannini E., 649 Goddard C., 531 Goldberg E., 623 González M. S., 767 Grauso M., 649 Grigolava I. V., 477 Groppe J. C., 75 Grzelak K., 671 Guerard F., 791 Guðmundsdóttir S., 707

Hagen H. O. von, 805 Hajjou M., 791 Halarnkar P. P., 357 Hamilton M. G., 515 Harley E. H., 37 Harris J. B., 241 Hartemink R., 315 Hattori M., 193 Hermier D., 47 Herskovits T. T., 515 Hisatomi O., 599 Ho S. H., 121 Hoffman L. C., 589 Hoggard N., 57 Holder J., 689 Holmes R., 483 Hosokawa H., 277 Hulbert A. J., 523

Isani G., 103 d'Istria M., 33

Jagadeesan V., 167 Jamieson J. C., 445 Jayanthi Rao N., 167 Jensen B., 547 Jessen F., 547 Johnson R., 531 Kaji K., 145 Kaneko T., 145 Karashima K., 277 Karbowska J., 309 Kayada S., 599 Keen J. N., 393 Khotimchenko Y. S., 371 Klingenberg I. L., 183 Knabe D. A., 183 Kobayashi M., 755 Kochan Z., 309 Kohyama K., 225 Kohzuki H., 193 Komnick H., 65 Kondo H., 145 Kouba M., 47 Kristjánsson M. M., 707 Kumar D. S., 175

Lambeth D. O., 211
Le _hevalier P., 777
Le Gal Y., 791
Lee M. J., 379
Lehane M. J., 285, 291, 301
Leibenguth F., 725
Leong E. C. W., 121
Lesicki A., 425
Letman J. A., 683
Llanillo M., 91
Lobley R. W., 483
Lopez-Rosado R., 555
Lovett D. L., 115
Lukyanova O. N., 371
Luzi L., 605

McKenzie J. D., 477 Maltin C. A., 241 Mantle D., 241 Martin L. O. G., 577 Martin-Valmaseda E. M., 91 Masetti M., 255 Matsumura K., 193 Matsuno T., 719 Matsuo M., 145 Matsuoka N., 225 Matusiewicz M., 739 Mercer J., 57 Mezzasoma I., 605 Miller S. G., 467 Minelli A., 605 Miscetti P., 605 Moffatt M. R., 285, 291 Mominoki K., 785 Monteleone P., 33 Morimatsu M., 785 Morse D. E., 75 Muhonen W. W., 211 Mummery R. S., 385, 393 Murugan G., 799

Nagaraju J., 201 Nakagawa-Tosa N., 785 Nakamura H., 331 Nelis H. J., 799 Nguyen H. V., 633 Nichols P. D., 267 Niranjali S., 175

O'Hanlon G., 57 Obata T., 277 Ogawa M., 367 Ohga Y., 193 Ottaviani E., 403 Ovadia M., 83

Pagnucco C., 103
Paolucci M., 583
Pastore M., 131
Paterson I. C., 661
Pedibhotla V. K., 613
Pemberton P. W., 483
Potter I. C., 417
Power G. W., 417
Préaux G., 565
Principato G. B., 649
Prinsloo J. F., 589
Proietti A., 605
Proverbio F., 345
Proverbio T., 345

Rachev R., 761 Raphael K. A., 697 Reeds P. J., 633 Rees H. H., 57 Richardson K., 445 Rimoldi O. J., 767 Rönkkö S., 503 Rosario R. M. T., 613 Rosi G., 649 Rossi E., 131 Rovati G., 131 Saito M., 785 Sakagishi Y., 331 Sakai M., 755 Saleemuddin M., 339 Salehi-Ashtiani K., 623 Samuels R. I., 661 San Juan Serrano F., 577 Sanchez Lopez J. L., 577 Sánchez-Yagüe J., 91 Santos-Berrios C., 555 Schooley D. A., 357 Schreiber G., 523 Sellos D., 777 Serino I., 33 Severov S., 761 Sherma J., 729 Silhacek D. L., 467 Silman I., 409 Simpson K. W., 483 Smine A., 791 Smith S. B., 183 Soeda T., 277 Sørensen S. H., 483 Squier C. A., 511 Stanley-Samuelson D. W., 613

Taher M., 431
Tait A., 531
Talesa V., 649
Tamiya T., 367
Tanaka K., 539
Tariq Khan M., 339
Thanislass J., 175

Steen Law S. L., 511

Stoeva S., 761

Stradi R., 131

Sutton R., 697 Świerczyński J., 309 Theron J., 589 Thomas G. D., 613 Toker L., 409 Tokunaga F., 599 Tokunaga F., 599 Tsuchiya T., 367 Tsushima M., 719

Uchida Y., 277 Umeki S., 817

Van Wormhoudt A., 777 Vaschenko M. A., 629 Vaskovsky V. E., 629 Vessal M., 431 Voelter W., 761

Wachtmann D., 65 Wallaert C., 439 Ward W. G., 697 Watts S. A., 115 Wei Duan, 523 Wertz P. W., 511 Wessel G. M., 493 Williams S., 285 Williams S., 301 Winger L. A., 385

Yamanaka Y., 277 Yora T., 331 Yoshida T., 755 Yuan H., 145

Zagalsky P. F., 385, 393 Živadinović D., 451 Zölzer U., 805 Zurzolo M., 103

